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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/769,821	02/03/2004	Shunpei Yamazaki	740756-2705	9517
22204 7590 10/08/2008 NIXON PEABODY, LLP 401 9TH STREET, NW SUITE 900 WASHINGTON, DC 20004-2128			EXAMINER LIN, JAMES	
			ART UNIT	PAPER NUMBER
			1792	
			MAIL DATE	DELIVERY MODE
			10/08/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/769,821

**Applicant(s)**

YAMAZAKI, SHUNPEI

**Examiner**

Jimmy Lin

**Art Unit**

1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 2, 4-9 and 12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-9 and 12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/5508)  
Paper No(s)/Mail Date 8/19/08
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Miyakawa (U.S. Patent No. 6,051,150, listed in the IDS filed (8/19/2008).

Miyakawa teaches a method of etching an ITO film of a liquid crystal display (LCD). The etching is performed at about atmospheric pressure (i.e., about 760 Torr) in a plasma treatment chamber (abstract). A reactive gas is discharged to region 16 in the direction of arrow B as shown in Fig. 5 (col. 6, line 59-col. 7, line 13). The plasma treatment means is provided inside the plasma treatment chamber (Figs. 1, 5, and 6).

Claim 4: A resist mask can be formed over the ITO film (col. 5, line 64-col. 6, line 4).

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyakawa '150.

Miyakawa does not explicitly teach that the size of the LCD substrate has a size of 1,000 x 1,200 mm<sup>2</sup> or more. However, Miyakawa recognizes that the size of LCD panels is continually increasing in size and that the method of etching accommodates for the continual increase (col. 9, lines 21-24). One of ordinary skill in the art would have recognized that the process of Miyakawa would have provided an operable method for etching an ITO film at these increased sizes with predictable results. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have performed the ITO etching method of

Miyakawa on any substrate size, including those within the claimed range, with a reasonable expectation of success.

5. Claims 2, 5, 7-8, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyakawa '150 in view of Inoue (JP 07-024579, listed in the IDS filed 2/23/2005).

Miyakawa does not explicitly teach using a plurality of sets of electrodes for generating plasma. However, Miyakawa does teach that the ITO is selectively patterned. Accordingly, Inoue teaches a method of generating plasma in restricted regions (abstract). The apparatus comprises of a plurality of plasma generating electrodes, which are moved in the X and Y directions such that an etching pattern can be formed (Fig. 1). Because Inoue teaches that such a method was operable for selectively plasma etching a substrate, it would have been obvious to one of ordinary skill in the art at the time of invention to have applied the plasma etching apparatus of Inoue to the plasma etching method of Miyakawa with a reasonable expectation of success. The selection of something based on its known suitability for its intended use has been held to support a prima facie case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945).

Claims 7-8: Inoue teaches that the plasma treatment means can scan the substrate in the X and Y directions (Fig. 1).

Claim 12: Inoue teaches that the plasma treatment means can move along a rail (Fig. 1).

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyakawa '150 in view of Seki (JP 11-340129, listed in the IDS filed 2/23/2005).

Miyakawa does not explicitly teach that the resist mask is formed by use of liquid droplet jetting means. In fact, Miyakawa is completely silent as to how the resist film is formed. Accordingly, Seki teaches that a resist material can be dissolved in a solvent and deposited onto a substrate via an ink jet method. This method can provide a manufacturing process at low costs (abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have formed the resist mask of Miyakawa using an ink jet method as the particular resist film forming method with a reasonable expectation of success. One would have been motivated to do so in order to have used a low cost manufacturing method.

***Response to Arguments***

7. Applicant's arguments, see pg. 5-7, filed 8/19/2008, with respect to the rejection(s) of claim(s) 1 under 35 U.S.C. 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Miyakawa.

***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy Lin whose telephone number is (571)272-8902. The examiner can normally be reached on Monday thru Friday 8AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jimmy Lin/  
Examiner, Art Unit 1792

/Timothy H Meeks/  
Supervisory Patent Examiner, Art Unit  
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